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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,206	09/17/2003	Robert E. Hanes JR.	2003-IP-010160U1	3900

7590

06/15/2005

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EXAMINER

SMITH, MATTHEW J

ART UNIT

PAPER NUMBER

3672

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/664,206	Applicant(s) HANES ET AL.	
	Examiner Matthew J. Smith	Art Unit 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 50-55 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 9, 13-15, 17-19, 21-23, 25-30, 32, 33, 37-39, 41-43 and 45-47 is/are rejected.
- 7) ☒ Claim(s) 7, 10-12, 16, 20, 24, 31, 34-36, 40, 44, 48, and 49 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>17Sep03</u> . | 6) <input type="checkbox"/> Other: _____ |

Per 37 CFR 1.121, paragraph c 3, in the response to this Office action, applicants are reminded to also submit the claims without underlining, strikethrough, or words in bold font. A "clean copy" of the claims must be submitted.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 8, 9, 13-15, 17-19, 25-30, 32, 33, 37-39, and 41-43, are rejected under 35 U.S.C. 103(a) as being unpatentable over Card et al (5877127) in view of Smith et al. (5224546).

Card et al. disclose water (col. 14, line 25), viscosity-producing guar type polymer (col. 8, lines 15-20), boron cross-linking agent (col. 9, lines 10-11), pH adjusting compound (col. 9, lines 21-35), buffer (col. 9, lines 36-52), and suggests decreasing the viscosity after fracturing (col. 14, lines 7-9) but not a delayed cross-link delinker.

Smith et al. teach decreasing, degrading, uncrosslinking, delinking, or breaking a viscous treating polymer in a hydraulic fracturing or gravel packing operation (col. 1, lines 64-68; col. 2, lines 1-2) with a delayed gel breaker (col. 2, line 49).

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It would have been obvious to a person having ordinary skill in the art at the time the invention was made to include a delayed cross-link delinker, as taught by Smith et al. and suggested by Card et al, to the Card et al. composition in order to reduce viscosity to remove the treating fluid (Smith et al., col. 2, lines 11-14).

Claims 21-23 and 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Card et al in view of Smith et al. as applied to claims 1 and 25, respectively above, and further in view of McCabe et al. (6024170).

The combination discloses water, viscosity producing polymer, boron cross-linking agent, surfactant (Card et al., col. 14, line 45) and a delayed cross-link delinker but not dodecylbenzene sulfonic acid surfactant.

McCabe et al. present dodecylbenzene sulfonic acid (col. 4, line 43) as a surfactant in a treating fluid.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use dodecylbenzene sulfonic acid as a surfactant in the combination composition since it is a well known surfactant in a boron type cross-linking agent containing composition (McCabe et al., col. 4, line 45).

Allowable Subject Matter

Claims 50-55 are allowed.

Claims 7, 10-12, 16, 20, 24, 31, 34-36, 40, 44, 48, and 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Namba et al. (6232273) discuss using polysuccinimide or polyaspartic acid in well fluids.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Smith whose telephone number is 571-272-7034. The examiner can normally be reached on T-F, 9-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Bagnell
Supervisory Patent Examiner
Art Unit 3672

MJS *MJS*
29 April 2005